Solutions: Examining Relationships Checkpoint 1

Question 1

Select one answer.
10 points

A store asked 250 of its customers whether they were satisfied with the service or not. The responses were also classified according to the gender of the customers. We want to study whether there is a relationship between satisfaction and gender.

A meaningful display of the data from this study would be:

- (a) side-by-side boxplots
- (b) a pie chart
- (c) a histogram
- (d) a scatterplot
- (e) a two-way table

Correct answer: (e)

Question 2

Select one answer.
10 points

A survey was conducted to study the relationship between the annual income of a family and the amount of money the family spends on entertainment. Data were collected from a random sample of 280 families from a certain metropolitan area.

A meaningful graphical display of these data would be:

- (a) side-by-side boxplots
- (b) a pie chart
- (c) a stemplot
- (d) a scatterplot
- (e) a contingency table

Correct answer: (d)

Question 3

Select one answer.
10 points

In order to study whether IQ level is related to birth order, data were collected from a sample of 540 students on their birth order (Oldest/In Between/Youngest) and their score on an IQ test. The data collected in this study would be best displayed using:

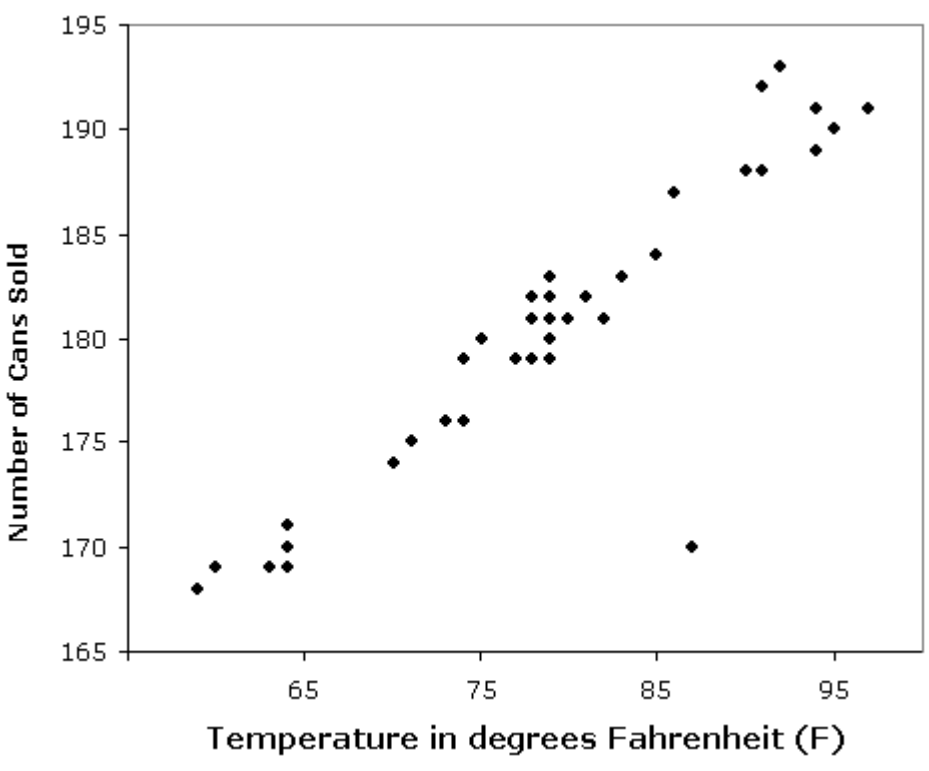
- (a) a pie chart
- (b) a histogram
- (c) a scatterplot
- (d) a two-way table
- (e) side-by-side boxplots

Correct answer: (e)

Question 4

Select one answer.
10 points

A local ice cream shop kept track of the number of cans of cold soda it sold each day, and the temperature that day, for two months during the summer. The data are displayed in the scatterplot below:



Which of the following is the best description of the relationship between X and Y as it appears in the scatterplot?

- (a) Positive linear relationship with outlier(s)
- (b) Positive linear relationship with no outlier(s)
- (c) Positive nonlinear relationship with outlier(s)
- (d) Negative linear relationship with no outlier(s)
- (e) Negative nonlinear relationship with outlier(s)
- (f) Negative nonlinear relationship with no outlier(s)

Correct answer: (a)

Question 5

Select one answer.
10 points

Which of the tables is the appropriate table of conditional percents to discover if the region where one lives affects whether or not one has health insurance?

table A

Region	Uninsured	Insured	**Total**
Northeast	12.6%	87.4%	100%
Midwest	12.0%	88.0%	100%
South	18.2%	81.8%	100%
west	17.4%	82.6%	100%

table B

Region	Uninsured	Insured	**Total**
Northeast	2.3%	16.2%	18.5%
Midwest	2.7%	19.6%	22.3%
South	6.6%	29.5%	36.1%
West	4.0%	19.1%	23.1%
Total	15.6%	84.4%	100%

table C

Region	Uninsured	Insured
Northeast	15.0%	19.2%
Midwest	17.1%	23.3%
South	42.1%	35.0%
West	25.8%	22.6%
Total	100%	100%

- (a) table A
- (b) table B
- (c) table C

Correct answer: (a)

^ Top ^

Save Submit and finish